2023 REQUEST FOR GRANT APPLICATION
Issued by the Utah Department of Natural Resources
Division of Forestry, Fire & State Lands
For Great Salt Lake Research Projects

1.0   STATEMENT OF INTENT

The Utah Department of Natural Resources, Division of Forestry, Fire & State Lands requests proposals for research projects that will assist the Division in becoming better-informed stewards of Great Salt Lake (GSL). It is the intent of the Division that gaining a better understanding of the lake system leads to a better and defendable basis for management decisions that lead to maintaining this important ecosystem.

The Great Salt Lake Tech Team, through its Research and Grants Subcommittee, has identified nine "hot topics" that research projects will address, either individually or in combination:

1. **Causeway Breach Flow –** As lake levels are projected to remain low in the near-future on GSL, it is important to understand the exchange of flows between the north and south arms of the lake at the UPRR causeway breach. During these times of lower flows between the bays it is an opportune time to improve the data-driven modeling at the breach to improve prediction of flow and salt-transport through the breach. Further, there is a need to better understand the density difference and the dynamic interaction between the deep brine layer and upper brine layer at the breach. How do the interactions of the layers at the breach impact the salt balance of GSL?
2. **Microbialites –** The historic low lake levels of GSL have exposed hundreds of acres of microbialites. With countless structures exposed, what more can we learn from their importance and their sustainability? What is their relationship to the greater GSL ecosystem and what can be done to ensure the microbial mats can recolonize on the structures after they've been exposed for long periods of time?
3. **Water delivery to GSL wetlands –** In order to sustain healthy water bird populations and healthy wetland habitats, wetland managers need to further understand just how much water is flowing into Great Salt Lake wetlands and how much water is necessary to sustain healthy bird populations. Managers need to understand the volume of water required to meet a range of needs such as, waterfowl production, monthly bird use, daily evapotranspiration rates, canal seepage losses and water depth requirements. Understanding historic water use would also be beneficial for ongoing GSL modeling efforts. Also, the identification of flow gage locations would be a helpful outcome of this project.

4. **Wetland health and shorebird use –** Improving wetland health is vital to ensuring the biodiversity of the GSL ecosystem. Invasive plants, in addition to *phragmites,* found in wetlands undoubtably have an impact of bird populations that rely on GSL wetlands. What are the impacts of wetland plant changes on birds that depend on the land and what measures (and plant species) are recommended to improve wetland flows and biodiversity? While phragmites has received much attention in recent years, what other invasive and invasive hybrids are occurring and where are they? What is the distribution of shorebirds and the ecological factors driving their presence in areas traditionally utilized by the birds? How do we sustain shorebird populations as their habitat decreases with decreasing lake levels?

5. **GSL and dust** – Building upon existing research, there remains a range of questions to that could be further explored regarding GSL dust. We know that much of the exposed bed of GSL is covered with a salt crust that does not produce dust. However, we do not know the stability of the salt crust. Hypothetically, rain and melting snow should dissolve the salt crust and move it lakeward, potentially exposing underlying soils that will erode and produce dust. How long would that take and what could that mean for Wasatch Front residents and our snowpack? Further, how much GSL dust, relative to other dust sources, is transported to nearby communities and how much GSL dust is deposited on the Wasatch snowpack? In understanding the effects of GSL dust, how do we control for other dust sources such as regional playas and/or anthropogenic sources of dust like construction or mining?

6. **Lakebed mapping –** The low lake levels make it an opportune time to develop a comprehensive bathymetric map of GSL. Using lidar laser technology has been recommended as a means to more accurately map the bed of GSL. However, given the composition of water and minerals in GSL it is uncertain if lidar can penetrate through to the lakebed. A bathymetric lidar pilot study could be performed to assess the feasibility of using the same methodology across the entire lakebed.

The outcomes and deliverables of this Request for Grant Application are deliberately non-specific to allow the submitting entity to craft an approach that will bring understanding and/or define future research needs. The successful applicant must indicate the relevance and importance of the work to GSL and demonstrate how it will benefit the Division.

Proposals are solicited for one- to two-year research projects that address an aspect of one or more of the "hot topics" listed above. Priority will be given to one-year projects. Applicants wishing to receive a second year of funding must reapply for funding the following year.

All deliverables are due on June 24, 2023. If the project is a two-year project, an interim report is due on June 24, 2023; with the final deliverable due no later than June 24, 2024. Expenditures eligible for funding under this proposal include labor, supplies, travel, materials and equipment.

2.0   BACKGROUND

The Division of Forestry, Fire and State Lands as part of its statutory responsibilities recognizes the need to understand aspects of the GSL in order to manage the lake and protect its resources. The authority for this Request for Grant Application comes from Utah Code 65A-10-8 that outlines the management responsibilities of the Division for Great Salt Lake. Available funding under this Request

for Grant Application comes from the Utah State Legislature to the Utah Division of Forestry, Fire and State Lands.

3.0   APPLICANT ELIGIBILITY/REQUIREMENTS

This request is directed to federal, state, tribal and local governments, communities, businesses, universities, colleges and non-profit organizations.

Applicants may apply for up to **$75,000** for any project. It is anticipated that a total of approximately $200,000 will be available for projects and that more than one project will be funded. Two-year projects may be considered, however, 60% or more of the total grant request must be spent before June 24, 2023.

Applying organizations or businesses must have the ability to ensure fiscal accountability.

4.0   ELIGIBLE ACTIVITIES

Funds may be used for a range of approaches to the "hot topics" including: to conduct pilot projects; synthesize new or existing information; develop methods to address a research questions; apply existing knowledge to a specific problem; define and study an aspect of a specific research question; or define future research needs.

5.0   ADMINISTRATIVE REQUIREMENTS

5.1   Those submitting proposals must examine all contract documents, noting particularly all stipulations that in any way affect work output. Failure to fully understand the amount and nature of the work required to fulfill all terms of the contract documents will not be considered as a basis for extra compensation after a contract has been awarded.

5.2   If discrepancies, omissions, or ambiguities are found in contract documents, the Division will be notified at once. The Division will send written corrections or explanations. The Division will not be responsible for any oral instructions.

5.3   Proposals that substantially add to, subtract from, or otherwise change the provisions of this request will be considered void.

5.4   Proposals must certify that all entities responsible for authorizing activities have agreed that their proposal should be submitted as written.

5.5   Proposals must certify that funds awarded to the proposing entity by the Division through any contract issued pursuant to this Request will not be used to supplant funds that it may have at its disposal from other sources.

5.6   Because the source of grant monies are public funds, submitted proposals become the property of the Division of Forestry, Fire and State Lands and will become public records following the award of the grants. Content of unsuccessful proposals may be protected to the extent allowed by law at the request of the submitter. The request should be part of the proposal on the basis of proprietary ideas, processes, equipment, copyrights, etc. Information of the cover sheet will not be protected information.

5.7   Research reports will be available to the public through the Division of Forestry, Fire and State Lands and may be published online.

5.8   When submitting invoices for payment, grant recipients will provide the Division of Forestry, Fire and State Lands with detailed accounting information. Personnel costs should detail the charges per individual staff member working on the project. Copies of invoices and receipts from the purchase of materials and supplies for project should be submitted. Travels costs should be detailed (i.e., mileage reimbursement and cost per mile, vehicle rental charge).

5.9   The overhead for each project budget shall not exceed 10%.

5.10   In addition to the project deliverable, researchers will be required to present research findings at a Great Salt Lake Technical Team Meeting and provide a 1 – 2 page project summary.

6.0   PROPOSAL COMPONENTS

To be considered, project proposals must include the following components:

6.1   <u>COVER SHEET</u>

Use attached form.

6.2   <u>PROJECT NARRATIVE</u>

Please limit to eight (8) pages single sided, singled spaced, 12-point type document not including resumes (see list of appendices, below). The narrative should provide:

A. Information about the principal investigator and project team members.

B. Name and nature of the sponsoring institution, including relevant financial information such as overhead rate or 501(c)3 status.

C. Declaration of close associations of research team members with staff of the Division of Forestry Fire and State Lands, members of the Great Salt Lake Technical Team, or members of the Utah State Legislature.

D. Plan of work including goals, objectives and methods of the research project. This section should include a discussion of how the requested funding and approach will be adequate to accomplish the goals and objectives of the research project.

E. Discussion of the Importance of the project to the public interest, to a better understanding of a significant research issue, or to management of Great Salt Lake.

F. Discussion of how the project addresses an aspect of at least one of the "hot topics" listed in 1.0 Statement of Intent.

G. Discussion concerning related work done or in progress by principal investigator and members of the project team.

6.3 COLLABORATION/PROJECT PARTNERS
Please restrict to a summary section of two (2) pages single sided, singled spaced, 12-point type document not including letters of commitment (see list of appendices, below).

A. Identify partners and their contributions to the proposed project.

B. Letters of commitment describing the specific commitment (provided by the project partner and included as an appendix).

C. Potential for future leverage associated with the research project.

6.4 PROJECT BUDGET AND SCHEDULE
Project proposals must present a budget table in a format similar to that of the example below. The budget table should include expenses expected to be covered with grant funds, plus any state and local match sources.

A. Total Projected Costs by Category. Categories are: personnel, equipment, supplies, travel, administration, other.

B. Identification of matching funds or contributed resources, whether cash or in-kind services. If in-kind, state the category: personnel, equipment, supplies, travel, administration, other.

6.5 APPENDICES
A. Resumes of key project team members.

B. Letters of support from community leaders, community groups, agencies, etc.

C. Letters of commitment from declared partners.

Sample Budget Table

Budget Category	Unit Cost ($)	# Of Units	Grant funds requested	Matching Funds (Cash or In-kind)	Total
Personnel					
Equipment					
Materials/Supplies					
Travel					
Administrative Overhead					
Other (list)					
TOTAL PROJECT COST					

Sample Estimated Schedule of Work

Organization	Activity/Output	QTY	Month 1-3			Month 4-6			Month 7-9		
University of Bluffdale	Literature search	1			■						
University of Bluffdale	Field work	1				■	■				
University of Bluffdale	Data analysis and report	1						■	■		

7.0 RANKING CRITERIA

The Division will follow guidelines developed by members of the Great Salt Lake Technical Team to review and evaluate proposals. An evaluation team made up of State and Great Salt Lake Technical Team members will evaluate proposals. The evaluation process will be based on how project elements contribute to the stated goals, the qualifications of the proposal and the information asked for in this Request for Grant Application. Proposals will be evaluated based on following criteria:

Weight	Criteria
25%	Potential to demonstrate an early "success" with respect to an aspect of one or more of the four "hot topics."
30%	Project importance to the Utah public AND/OR Project potential to increase understanding of a research need AND/OR Project potential to assist the management of Great Salt Lake
10%	Project potential for current or future partnerships with funding and/or collaboration
10%	Understanding and articulation of the research concern
10%	Specific work plan elements ❑ milestones ❑ reasonable and rational budget ❑ reasonable work plan and scope of work ❑ quality of presentation ❑ completeness of proposal
10%	Qualifications and past performance of investigators
5%	Other

8.0 PROPOSAL APPLICATION PROCEDURE

All proposals must be electronic and received attached to an email as a PDF document. Each proposal must be received no later than **Friday, April 22, 2022 at 5:00 pm**. Absolutely no exceptions will be made for proposals not received by the appointed time. **Proposals shall be submitted to Laura Vernon at the email address below.** Questions regarding the Request for Grant Application should also be addressed to Laura Vernon.

> Laura Vernon
> Great Salt Lake Coordinator
> Forestry Fire & State Lands
> lauravernon@utah.gov
> (801) 673-0227

9.0 CONTRACT DURATION

The contract period will extend from the date of contract approval by the Utah Division of Forestry, Fire & State Lands until June 30, 2023.

10.0 FUNDING NOTIFICATION AND GRANT AWARD

Proposals selected for funding will be notified within 30 days of the submission deadline. This initial notification should not be construed as an official grant award. The Division is responsible for follow-up with the appropriate documentation to award the grant. Successful candidates are encouraged to consult with the awarding agency before incurring any expenses, as pre-award costs are not usually allowed.

FORESTRY, FIRE & STATE LANDS
REQUEST FOR GRANT APPLICATION
Cover Sheet

Project Title	
Lead Project Sponsor	
Project Contact	Name
	Mailing Address
	Phone Number
	Fax Number
	E-Mail Address
Project Description / Abstract	

Project Funding	Amount Requested $	Matching Funds $	Total Project Cost $